

# *HYDROGEN GENERATION APPARATUS FOR INTERNAL COMBUSTION ENGINES AND METHOD THEREOF*

## **Abstract**

A system and method are provided for generating hydrogen for use with an internal combustion engine. The system includes a venturi device coupled with an exhaust stream from the internal combustion engine. The venturi device creates a gas flow through a condenser to generate reactant water. After the reactant water is polished to remove contaminants, hydrogen and oxygen are dissociated using a PEM based electrolyzer. The hydrogen gas is used by the internal combustion engine to assist in the combustion process and reduce pollutant emissions.